

# Speech Quality Assessment: Information Sheet

You are being invited to take part in listening test to assess the perceived quality of speech signals. Before you decide whether or not to participate, it is important for you to understand why the listening test is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

Take time to decide whether or not you wish to take part. Thank you for reading this.

## **What is the project's purpose?**

This study is being run as part of the lecture COM3502/4502/6502 Speech Processing to teach students how listing tests are conducted in the field of speech quality assessment by humans.

The purpose of this particular study is to evaluate speech signals, processed by different approaches to 'speech enhancement'. Speech enhancement is the task of taking a poor-quality speech recording and processing it to make it sound better. This is a very important technology for many devices, such as hearing aids, telephones and video/voice conferencing tools.

Prior to this study, a dataset of clean and noisy audio pairs has been created. The noisy audio has then been processed by a number of state-of-the-art speech enhancement systems. It is this enhanced audio which you will be assessing the quality of.

The results will be discussed during the lab classes of the Speech Processing lecture and might be made publicly available so that other researchers interested in the field.

## **What will happen to me if I take part? What do I have to do?**

The experiment will involve using headphones to listen to short sound samples of speech in background noise.

If you do not have access to headphones, ensure that you are in a quiet room where you will not disturb others during the experiment.

You will be provided with a web link to start the listening test, which will be provided to you during the lab session.

On each page you will be asked to evaluate and compare the quality of several audio files containing speech. You will also be able to listen to a reference audio file to compare with the signals being evaluated. You will be asked to evaluate a number of pages in this way, which should take maximally 45 minutes to complete.

Feel free to take breaks for as long as you like, however the listening test must be completed within one session. **If you close the browser window, your results will NOT be saved.**

## **What are the possible disadvantages and risks of taking part?**

The experiment requires listening to sounds over headphones. This could have the potential to cause tiredness or even hearing damage if you would listen to the sound example with too

high level. To avoid this we ask that you adjust your system volume to not exceed safe levels. You will be able to take a break in the session whenever you like. If you do experience any unexpected discomfort during the experiment you are asked to stop and notify the experiment manager.

### **What are the possible benefits of taking part?**

You will gain a better understanding of how listening tests are conducted in a research environment. It is hoped that this work will also lead to advances in future speech enhancement algorithms. These advances will improve the performance of everyday devices such as hands-free systems, headphones, augmented reality headsets or hearing aids.

### **Will my taking part in this project be kept confidential?**

Yes. Any personally identifying information that we collect about you during the course of the research will be kept strictly confidential and will only be accessible to members of the teaching/research team. You will not be able to be identified in any reports or publications. All personal data will be deleted immediately after the listening test is completed by all participants. The only data that might be published is your anonymised rating scores.

### **What is the legal basis for processing my personal data?**

According to data protection legislation, we are required to inform you that the legal basis we are applying in order to process your personal data is that 'processing is necessary for the performance of a task carried out in the public interest' (Article 6(1)(e)). Further information can be found in the University's Privacy Notice

<https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

### **Who is organising and funding the research?**

This listening test is being organised as part of the COM3502/4502/6502 Speech Processing lecture and results might be used in the PhD research project of George Close, teaching assistant for COM3502/4502/6502 Speech Processing.

### **Who is the Data Controller?**

The University of Sheffield will act as the Data Controller for this study. This means that the University is responsible for looking after your information and using it properly.

### **Who has ethically reviewed the project?**

This project has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by the Department of Computer Science.

### **What if something goes wrong and I wish to complain about the research?**

Please contact Dr Stefan Goetze ([S.Goetze@sheffield.ac.uk](mailto:S.Goetze@sheffield.ac.uk)) or George Close ([gclose1@sheffield.ac.uk](mailto:gclose1@sheffield.ac.uk)), if you wish to raise a complaint. If you feel your complaint has not been handled to your satisfaction, you can also contact the Head of Department, Prof. Heidi Christensen ([heidi.christensen@sheffield.ac.uk](mailto:heidi.christensen@sheffield.ac.uk)), who will then escalate the complaint through the appropriate channels. If the complaint relates to how the participants' personal data has been handled, information about how to raise a complaint can be found in the University's Privacy Notice:

<https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

**Who can I contact for further information?**

If you require additional information please contact the primary researcher, George Close via Email [glclose1@sheffield.ac.uk](mailto:glclose1@sheffield.ac.uk)

**You will be given an electronic or paper copy of this information sheet.**

**Thank you for your participation in this study.**